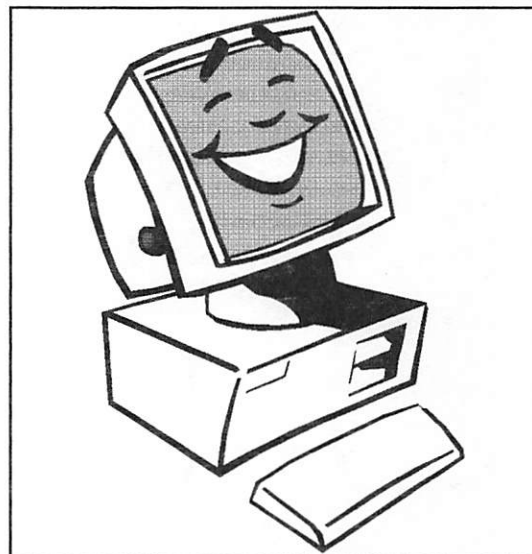


**Joseph B. Bustillos**  
**17300 East 17th Street, #J-247**  
**Tustin, CA 92680**  
**714-832-7778**

### **Portfolio Piece**

I have selected my ED502 Special Project: "Computers in the Classroom" because it is my most recent work. It reflects my desire to bridge the gap between promises of emerging computer technologies and the budgetary realities of the educational world. The computer instructor at Venado Middle School once lamented after attending a weekend computer fair put on by Apple computers that "those people just don't know how little money we have to spend." The promises and possibilities are endless, but delivered product with the available funds are another matter altogether. The Project includes tips, suggestions and a curriculum unit using micro-computers.





**ED 502 SPECIAL PROJECT**

**COMPUTERS IN THE CLASSROOM:  
LET'S GET PRACTICAL**

**SUMMER 1993**



**JOE BUSTILLOS  
17300 EAST 17TH STREET  
SUITE J-247  
TUSTIN, CA 92680  
714-832-7778**

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## **INTRODUCTION: Panacea or Delusion?**

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**E**arlier this decade, a Presidential Commission on Education reported that "if a foreign government had imposed this system of education on the U.S., we would rightly consider it an act of war."

- Jerry Pournelle, BYTE columnist<sup>1</sup>

I love this quote. Pournelle, who has been working with micro computers since the late 70's, goes on to cite another study which equates our educational system and the old Soviet system of collectivized farming—a grim picture, indeed. But wouldn't you know, Pournelle believes that the old Soviet system's demise was brought about in no small way by the use of micro computers in the Soviet Union. He believes that the spread of these little devices forced power from the central organizations to the smaller organizations, individuals and republics. In the same way, he feels that micro computers will revolutionize education to get the power away from the ineffective, unresponsive, bloated state and district organizations down to the schools, the classrooms, the teachers and the students.

**P**utting computers into schools is like [if] for some reason we thought our kids wouldn't succeed if they didn't become musicians [so] the state legislature decided to put pianos in every classroom. It's not going to help. Any musician will tell you that music is not in a piano.

- Alan Kay, Futurist<sup>2</sup>



Kay, one of the founders of Xerox's Palo Alto Research Center (the birth place of the Apple Macintosh interface), obviously does not agree whole-heartedly with Pournelle's assessment. He believes that real improvement in the educational system is dependent on "low-tech" old fashioned parental involvement. Constant, active, supportive parental interaction with their children's educational welfare will do what no box of silicon and plastic can hope to do, according to Kay.

Of course there is some truth to the beliefs of both men. And the reality is that micro computers are making their way into the classrooms and teachers are expected to master the little beasts. It is the purpose of this paper to assist the reader make an informed assessment between the promises of the technology-panderers and the financial or budgetary realities of the educational enterprise. Included are lists of resources, tips on hardware and software and a sample communications unit using various technologies.

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## THE PURPOSE OF COMPUTERS IN THE CLASSROOM

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In a study designed to determine whether multimedia computers helped "reluctant" writers come up to speed author, Colette Daiute, astutely noted:

**We wanted to find out whether multimedia composing supported children's text composing or simply diverted them from writing and how children used diverse media as sources of knowledge and expression.<sup>3</sup>**

It's often the case in business, that computerization is implemented and only later it's discovered that the actual gains are of an

"accounting/management" variety and have very little to do with the actual job. In education this is a luxury that we cannot afford. Such dilemmas can be lessened by clearly defining before hand how the computer(s) are going to be used in the unit under consideration.

Briefly, computers in the classroom can be understood two ways. The first is "how" the computer functions within the classroom. The computer(s) can function as a tool or as a tutor or as a "tutee."<sup>4</sup>

### **COMPUTER USES:**

| <b>Tools:</b>           | <b>Tutor:</b>      | <b>Tutee:</b>   |
|-------------------------|--------------------|-----------------|
| database (grade book)   | drill and practice | programming     |
| test creation/taking    | problem solving    | (where we teach |
| word search (crossword) | tutorials          | the computer)   |
| word processing         | simulations        | BASIC           |
| art work                |                    | LOGO            |
| music                   |                    | PASCAL          |

The second way to understand computers in the classroom is by asking "who" is using the computer. That is, computers in the classroom can be understood as being (1) an aid to the teacher, or (2) as an aid to the students.

### **Aid to the Teacher**

As an aid to the teacher the computer can help in one of two ways. The first is as a "classroom management" tool (eg., grade book, attendance, testing, parent correspondence). Besides using individual computer programs to aid in classroom management some schools and school districts employ CMI or computer managed instruction. CMI uses artificial intelligence to help the teacher run the classroom. The computer might help by individualizing the instruction. That is, the teacher tells the computer about a particular student and the goals that he/she would like to meet and the computer doles out testing at the student's pace to meet the specific goals. CMI obviously requires special software and powerful

hardware and is therefore not widely used. But there is at least one district in Orange County (Buena Park School District) that uses CMI (the Josten Educational software).

The second way that the computer is an aid to the teacher is in the actual classroom instruction. Instruction with computers might be implemented, for example, in a large group setting with the teacher working through a lesson outline or text using a large monitor or an LCD panel on an overhead projector instead of the chalkboard or transparencies on the overhead projector (if the teacher doesn't have access to large monitor or LCD panel then the lesson can be printed out on the transparency right from the computer).

This type of instruction is called CAI or computer aided instruction. CAI can be understood in four basic categories (which corresponds with the "Tutor" function listed above):

- 1) Drill and Practice: helps use and remember previous taught information; its chief asset is the computer has unlimited "patience" to handle repetitive tasks.
- 2) Tutorial: The computer can be used to introduce new material in an interactive fashion such as new software (demos) or subjects (science).
- 3) Simulations: The computer can be used to simulate chemical experiments (chem lab), natural/social science investigations or teacher directed de-briefing.
- 4) Instructional Games: This actually overlaps with the above mentioned simulation function; eg., Oregon Trail, SimCity, SimEarth.

The most important thing that the teacher must remember when using the computer in the classroom is that it has to be tied to a specific need and not just arbitrarily thrown in.<sup>5</sup>

## **Aid to the Student**

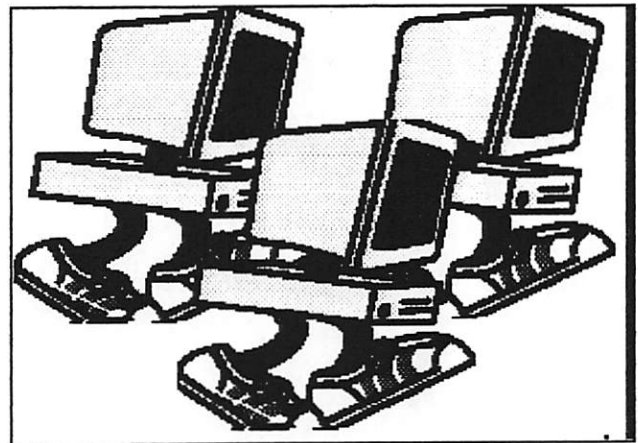
The computer is an aid to the student as a tool, when the student uses a word processor to complete an assignment, for example; or when the computer directs the assignment as in the simulations or drill and practice routines.

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## **THE LIMITATIONS: Computers and "GIGO"**

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There is an intrinsic limitation regarding computers that has been popularized as "Garbage in/Garbage out." What this specifically means is that the computer in the classroom is only as useful as the weakest link in its implementation, whether its the educational philosophy of the software writer, or a design weakness of the software itself or a teacher unfamiliar with the program/lesson. The only way to combat this problem is "Planning, planning, planning," as Dr. Yusem would say.<sup>6</sup>



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## **THE LIMITATIONS: School Districts and the Hardware Software Realities**

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**While** I'll readily agree the Apple II family isn't as sexy as the Macintosh family, it does have significant advantages for educators. Right out of the box an Apple

Ile costs less than any Mac (and a lot less than any useful Mac), which means schools get more machines per dollar...

It's obvious that there will be Apple IIs in American's schools for years to come... Let me turn conventional wisdom on its head---buying Macs or PCs is an immediate investment in obsolescence. Buying an Apple II is an investment in a computer that will be in Americas's schools almost as long as chalk. If you had as little money to spend as the US education system toes, would you invest in computers that you knew would be obsolete before your freshmen were seniors?

... The Apple II family provides the modest, stable level of computer technology that American education needs. The challenge is to get the country's computer experts off education's back. Let's let teachers teach with the tools they ask for and stop shoving expensive technology---that wastes their time without solving problems---down their throats.

- Tom Weishar, SPC Apple Press<sup>7</sup>

Of the local school districts, Irvine Unified is not known for being underfunded in its implementation of computers in the classroom. And yet a teacher in the computer lab of one of the schools lamented at the gap between what hardware/software providers would like to sell you and what a given school can afford. The reality is that we will not see one computer for each student any time soon.

Of the school districts that I surveyed most did not have a "one computer per classroom" arrangement but were turning to a computer lab arrangement.(see Appendix B for specific listing of findings) The only other generalization that could be made was that the districts was turning more power over to the individual schools and that most of these labs were being run by part-time instructional aids.

Lab sizes ranged from as small as eight computers to as large as 25. Hardware-wise the schools had everything from Apple Iles to Apple IIGSs to IBM P/S2s to Macintosh LCs and classics. And Apple IIs continue to be heavily represented.

Having managed a computer lab of 30 Apple Iles for several months I find Mr. Weishar's comments a bit like the guy who put off going to the "horseless carriage" because he didn't want to part with his collection of

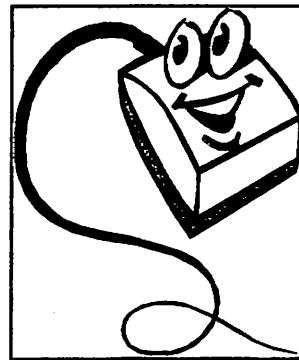


buggy whips. In their time the Apple IIs performed a wonderful service and amassed an impressive mountain of educational software but the days of 130KB single-sided floppy disks and 4mHz clock speeds are long past. If anyone has any doubts about this just try a program such as The Children's Writing and Publishing Center, a desktop publishing program which is available on both the Macintosh and Apple II computers. Speed, ease-of-use, print quality—I'm sorry, the old Apple II just doesn't cut it. I mean, it's doable but so is writing on clay tablets but you won't find James Michener peddling his latest 800-page tome in sun-baked cuneiform. Having said that, if you are faced with a roomful of aging Apples, it is better than clay tablets.

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## **THE LIMITATIONS: Children, Mice and Keyboards**

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As long as the Apple IIs rule the Primary education universe we will be stuck with a somewhat less-than-adequate user interfaces, especially for the younger students. As long as efficient computing is dependent on adequate keyboard skills than concentrated computer usage is limited to the upper grades. Pre-literate children have certainly been shown to be conversant with mouse driven software, but educational/instructional software is still predominantly keyboard driven. The teacher with younger students would be wise to introduce his/her students to computer usage but the majority of computer time for this teacher would be as a tool to develop instructional units.

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## **RESOURCES:**

### **User Groups/BBS Publications & Computer Stores**

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One of the greatest resources for teachers seeking to implement effective computer usage in the classroom is user groups and electronic bulletin board services (BBS).

#### **User Groups:**

*CUE (Computer Using Educators)*, meets at Spurgeon Intermediate, 2701 West 5th street, Santa Ana (5th & Fairview), for more info contact Pat Lawrence (714) 971-3501.

#### **BBSs:**

*NOCCC (North Orange County Computer Club)*, BBS 714-730-6743 (see Appendix A for a sample listing of available educational, teacher support public-domain or shareware IBM software)

#### **Educational Computer Publications:**

EISI Educational Software Publisher, Los Gatos, CA (800) 955-5570  
Great Teaching in the One-Computer Classroom, Tom Snyder  
Productions, Inc., Educational Software, 90 Sherman Street,  
Cambridge, MA 02140, (617) 876-4433

#### **Consumer Computer Magazines:**

BYTE, (subscriptions) P.O. Box 552, Hightstown, NJ 08520  
Coast Computer Magazine, (mailing address) P.O. Box 19589-500,  
Irvine, CA 92713  
PC Magazine, (subscriptions services) P.O. Box 54093, Boulder, CO  
80322-4093  
PC Techniques, (editorial offices) 7721 East Gray Road, Suite  
204, Scottsdale, AZ 85260.  
PC World, (editorial offices) PC World Editorial, 501 Second St.  
#600, San Francisco, CA 94107

## Computer Stores:

### Educational software sources:

*Educational Resources*, (800) 624-2926

*Garden of Eden*, 16485 Magnolia, Westminster, 714-841-4994 (long standing history of Apple/Educational support, referred to by The Apple Doctor, 714-859-2362).

*Surplus Computer Software*, Harbor just north of MacArthur, Santa Ana (more of a flea market style, also referred to by the Apple Doctor).

### General software sources:

*CompUSA*, Fountain Valley, 714-965-0580 (MAC/IBM formats only).

*Computer City*, Garden Grove, 714-892-0070 (MAC/IBM formats only).

*Egghead*, Irvine, 714-559-5119 (MAC/IBM formats only).

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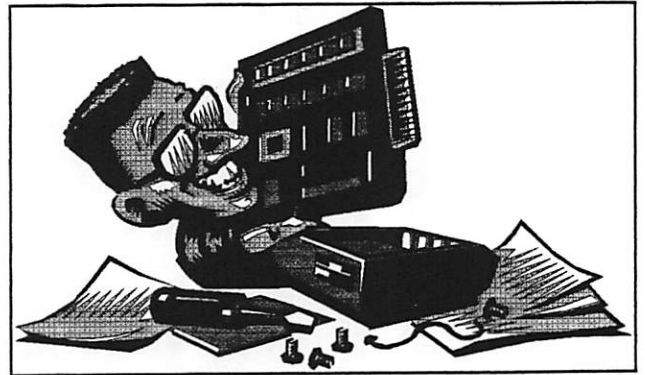
## TIPS/SUGGESTIONS:

### Hardware/ Software

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#### Hardware:

Again, because the most common elementary school scenario will be for each school to have a multi-station Apple II lab (with individual teachers have minimal say on hardware purchases), the teacher is encouraged to thoroughly plan any computer time with specific projects using specific tools.



#### Software:



The following is a brief annotated list of software programs in alphabetical order. Apple programs listed can be found in the Reading Center. The reader is also encouraged to consult Appendix A for IBM software.

**Appleworks** (apple) - word processing, integrated drawing, database, spreadsheet program (unknown).

**The Children's Writing and Publishing Center** (apple/mac/dos) - beginning desktop publishing, newsletters, letters, reports (42.99@CompUSA).

**Circus Math** (apple) - math grades 2-3 (public domain).

**ClarisWorks** (mac/windows) - word processing, integrated software (94.99 @CompUSA).

**Conquering Decimals** (apple) - math 4-6 (public domain).

**Fraction Concepts** (apple) - math 3-5 (public domain).

**Fraction Munchers** (apple) - math 3-12 (public domain).

**FredWriter** (apple) - word processing, interesting feature = prompted writing (teacher can leave protect instructions that the student response to, can be printed without prompts) (public domain).

**Grammar Gazette** (apple) - desktop publishing 5-6; mad news (for reporters), weird news (for editors), and pig tales (for staff writers) (public domain).

**Grammar Monster** (apple) - language arts 3-4; selecting words to complete sentences, editing usage errors, and (my favorite) identifying parts of speech (public domain).

**Hitchhikers Guide to the Galaxy** (apple/MAC/IBM) - "language arts" - simulation, crazy sc-fi adventure game (unknown).

**KidPix** (Mac/IBM/Windows) - art, interesting feature = extensive sound capabilities, alphabet in English or Spanish, presentation module available (33.50 @CompUSA).

**Lewis and Clark Stayed Home** (apple) - social studies 5-9 - role playing, simulation (public domain).

**Lunar Greenhouse** (apple) - science 3-6 - simulation, experiment with light, temperature, weight, and foot control (gravity) (public domain).

**Mavis Beacon Teaches Typing** (MAC/IBM) typing instruction (20.00 @CompUSA).

**Microsoft Works** (MAC/IBM/Windows) word processing, integrated software (120.00 @COMPUSA).

**Microsoft Word** (MAC/IBM/Windows) word processing (320.00 @CompUSA).

**Oregon Trail** (apple/Mac/IBM/Windows) social studies, history, simulation (34.00 @CompUSA).

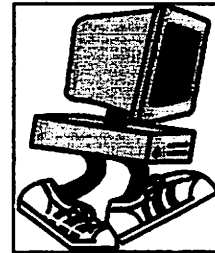
**PrintShop** (apple/MAC/IBM/Window), banners, cards, calendars, letterhead, signs (50.00 @CompUSA)

Where in the \_\_\_\_\_ is Carmen Sandiego? (world/history/USA/space)  
(apple/MAC/IBM) - social studies - simulation (50.00 @CompUSA)  
**WordPerfect** (apple/MAC/IBM/Windows) word processing (282.00  
@CompUSA).

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## **CURRICULUM EXAMPLE: Communication Unit**

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### **The Importance of Clear Communications<sup>8</sup>**

#### **Summary:**

**CLEAR COMMUNICATIONS:** In a multi-cultural society it is important to be a careful listener. One idea or word misunderstood can lead to years of conflict. Being a good communicator requires that we recognize all of the different ways we "hear" messages. Being a good communicator also requires that we become careful listeners.

#### **Lesson Instructions:**

**Lesson One: Playing "Radio Reporter" - verbal exercise**

1. **State the Learning:** We get "messages" through several different paths. Obviously, listening is the important to "hearing" a message.
2. **Teaching strategies:** Aural mode; observe student comprehension; careful instruction and preparation is needed.
3. **Instructional activities for children:** Select and separate one to five students to read separate short news items from a "kids" magazine into a tape recorder; replay tape in front of remainder of the class and have class write, in small groups or as individuals, one sentence summaries of each story.

4. **Examples of appropriate evaluation activities:** Have students present summaries before the class, ask class which summary is closest to the original story.
5. **Resources and support materials:** tape recorder and tapes, collection of "kids" magazines, use of computer and word processor optional for class summaries.

### **Lesson Two: Slide Show News Story - visual exercise part 1**

1. **State the Learning:** One important way we get our messages is visually. Can we get the message if it is the only medium used?
2. **Teaching strategies:** Visual mode; careful instruction and preparation is needed; select current news item from a pictorial magazine like Life or National Geographic, a minimum of five sequential pictures that tell the story; copy pictures without the captions onto transparencies; present "slide show" to class with instruction for them to figure out what the news story is; observe student comprehension.
3. **Instructional activities for children:** After presenting slide show have class write, in small groups or as individuals, one sentence summaries of each story.
4. **Examples of appropriate evaluation activities:** Have students present summaries before the class, give class the original news story and ask class which summary is closest to the original story.
5. **Resources and support materials:** Pictorial news magazines, transparencies, xerox-type machine, overhead (slide) projector, use of computer and word processor optional for class summaries. Use of video tape without sound instead of pictures is optional—noting that most news stories on TV have visual stories of less than 20 seconds which may not be enough to convey the story without extensive rewinding.

### **Lesson Three: Kids' Slide Show News Story - visual exercise part 2**

1. **State the Learning:** One important way we get our messages is visually. Can we get the message if it is the only medium used? Part 2.
2. **Teaching strategies:** Visual mode; careful instruction and preparation is needed; select several pictorial magazines like Life or National Geographic; divide class into small groups; instruct class to select a news item from magazines; help students copy pictures to transparencies (or have instructional-aide "do the copying"); help students present slides; observe student comprehension.
3. **Instructional activities for children:** In small groups student select a minimum of five sequential pictures that tell the story from pictorial magazines; copy pictures without the captions onto transparencies; present "slide show" to class with instruction for them to figure out what the news story is; After presenting slide show have portion of the class that did not give that presentation write, in small groups or as individuals, one sentence summaries of each story.
4. **Examples of appropriate evaluation activities:** Have students present summaries before the class, give class the original news story and ask class which summary is closest to the original story.
5. **Resources and support materials:** Pictorial news magazines, transparencies, xerox-type machine, overhead (slide) projector, use of computer and word processor optional for class summaries. Use of video tape without sound instead of pictures is optional—noting that most news stories on TV have visual stories of less than 20 seconds which may not be enough to convey the story without extensive rewinding.

### **Lesson Four: Colors & Music Experience - aural/visual combo**

1. **State the Learning:** When hearing is combined with seeing more than words can be communicated.
2. **Teaching strategies:** Aural/visual mode; select appropriate "mood" (usually instrumental) music and coordinate with

- appropriate colored transparency—minimum of three songs/colors to convey contrasts and similarities; using FredWriter write prompted section asking students what the colors and music conveyed regarding emotions, feelings, and any spoken/sung message; give presentation in darkened room using overhead projector or flood lamp to fill room with the color; observe for student comprehension
3. **Instructional activities for children:** After presentation divide class into small groups and have them answer FredWriter prompts.
  4. **Examples of appropriate evaluation activities:** Have students present summaries before the class, compare different responses to the same music/color.
  5. **Resources and support materials:** CD/record player/tape player, music (minimum of three songs), cellophane or transparencies in different colors; overhead projector or flood lamp, computers and Fred Writer for prompts.

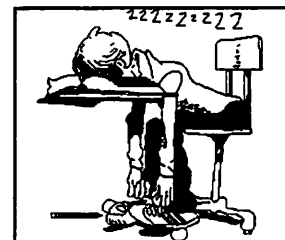
### **Lesson Five: Progressive story - Articulation part 1**

1. **State the Learning:** To encourage/establish creativity and cooperative learning; the ability to listen can also be demonstrated by the ability to predict where the storyteller's story might be going.
2. **Teaching strategies:** Visual (reading & writing); during a quiet work period place a single phrase or sentence on the top of a computer screen (in FredWriter, or other word processing) and encourage each student to quietly add to the "story".
3. **Instructional activities for children:** Each student adds a phrase or sentence to the story on a specific computer station.
4. **Examples of appropriate evaluation activities:** After everyone has had a chance to add to the story print it to a transparency and have the class read aloud the finished project.
5. **Resources and support materials:** computer and FredWriter, printer, transparency, and overhead projector.



## Lesson Six: Re-edit Progressive story - Articulation part 2

1. **State the Learning:** To encourage cooperative learning and better writing skills; communicating is often "saying it again with different words."
2. **Teaching strategies:** Visual and some aural mode; observe student comprehension; careful instruction is needed.
3. **Instructional activities for children:** project previous day's "progressive" story; divide class into small groups; Re-edit story using MAC or DOS version of "Kid-Pix" carefully using pictures as well as words to retell the story.
4. **Examples of appropriate evaluation activities:** Have students present stories using computer and LCD projector before the class, judge the "best story," "most creative," "best use of color," etc.
5. **Resources and support materials:** transparency; overhead projector; computer for each small group (MAC/Win) & Kid-Pix software (Broderbund)



I Love Reading

1. Pournelle, Jerry. "The Next Revolution." BYTE, vol. 15, no. 9, Sept 1990, p.70.
2. Kay, Alan. "On Computers in Education." BYTE, vol. 15, no. 9, Sept 1990, p. 232.
3. Daiute, Colette. "Multimedia Composing: Extending the Resources of Kindergarten to Writers Across the Grades." Language Arts, vol. 69, April 1992, p. 255.
4. Rafferty, Kevin. lecture notes, EDELM 415, CSUF, Fall 1992.
5. Lockard, James and Peter D. Abrams, Wesley A. Many. Microcomputer for Educators. 2nd Edition. New York: Harper Collins, 1990, p.255.

6. Yusem, Alex. lecture notes, ED 401, Chapman University, Summer Session 1993.
7. Weishar, Tom. "Apples are for schools." OrangeBytes, vol 17, No. 8, Aug. '92, p. 20.
8. Bustillos, Joseph and Trish Valentine. "Curriculum Project: The Importance of Clear Communications." EDELM415, CSUF, Fall 1992.

# APPENDIX A: NOCCC Educational Software List

---- THE CLUB BOARD ---  
As of Fri Mar 12 1993

THE CLUB BOARD (714) 730-6743 v.32bis (714) 730-5739 (HST DS v.32bis)

## 66. Tutorials, education, teacher support 194 Files using 32288 K bytes

| File Name     | Size   | Date     | File Description  |
|---------------|--------|----------|---|
| !GRADSH.T.ZIP | 8779   | 12-04-92 | Grade Sheet for Students. even does Weighted grades. Extremely fast (Last Revised: 11/14/92)  |
| #1TABLE.ZIP   | 42458  | 05-16-92 | HERE'S THE PERIODIC TABLE (Last Revised: 05/03/92)  |
| \$AMATH.ZIP   | 400235 | 11-01-92 | ADVENTURE MATH: Epic's New Educational Game! An excellent shareware learning experience from the makers of Jill of the Jungle. Solve addition & subtraction problems in 256 snazzy VGA colors. Adlib scores, Sound Blaster sound effects and voice! Makes learning fun for ages 5-10. Epic MegaGames, member ASP. (Last Revised: 09/25/92)  |
| 123GO.ZIP     | 17987  | 10-05-91 | very good number recognition for pre school Also simple arithmetic (Last Revised: 12/26/85)   |
| 123TLK27.ZIP  | 251076 | 09-12-92 | 123-TALK v2.7: talking educational program that works thru your PC speaker; your child (1-7) will learn to say numbers, addition, subtraction, drawing, singing, and more. (Last Revised: 08/07/92)   |
| AASPAN1.ZIP   | 157936 | 09-15-90 | Beginner's spanish tutorial (Last Revised: 08/13/90)  |
| ABCTLK25.ZIP  | 273995 | 08-08-92 | ABC-TALK v2.5: uses real human voice that teaches children to talk, learn alphabet, read, spell and work with a computer; teaches young children early words (hi, mama, dada, please, thank you, etc.) and how to interact with a computer; ABC-TALK teaches older children to say and understand the alphabet, to find letters on the keyboard, to recognize the letters in words and how to spell words; Also includes ABC SONG and EASY DRAW programs for the child's creativity. (Last Revised: 07/29/92) |
| ARIUS252.ZIP  | 60453  | 09-28-89 | Award winning teachers gradebook system. (Last Revised: 09/28/89)   |
| AIMAGDMO.ZIP  | 120120 | 02-07-92 | Tutorial on various kinds of expert systems & artificial intelligence from AI Magazine (Last Revised: 10/02/90)   |
| ALGEBRA.ZIP   | 71779  | 12-30-90 | Algebra learning program (Last Revised: 12/17/89)   |
| ALGEBRAX.ZIP  | 127679 | 03-23-91 | Step by step math tutorial (Last Revised: 09/16/90)   |
| ALGEWEIS.ZIP  | 132664 | 01-11-93 | Professor Weissman's Algebra Tutorials v2.12: random problems with step-by-step solutions; the program maintains a record of the student's progress and has five levels of difficulty; additional sets of problems are available from the author. 01/11/93 (Last Revised: 01/11/93)   |
| ALPHA1.ZIP    | 253941 | 06-27-92 | The Animated Alphabet; animated alphabet game for preschoolers; type a letter to cause an object beginning with that letter to be displayed with sound. 1 of 2 (Last Revised: 05/07/90)   |
| ALPHA2.ZIP    | 237475 | 06-27-92 | The Animated Alphabet. 2 of 2 (Last Revised: 05/29/92)  |
| ALPHABIT.ZIP  | 486614 | 09-12-92 | Teach preschoolers the alphabet. (Last Revised: 05/08/90)   |
| AMATH1-A.ZIP  | 133279 | 11-23-91 | Animated Math: for 3 to 5 years olds; teaches counting, addition and subtraction with animated rewards; drill and tutorial with graphic help as needed; visit the game room after completing ten questions; mouse support. 1 of 4 (Last Revised: 02/15/91)  |
| AMATH1-B.ZIP  | 110090 | 11-23-91 | Animated Math: animated math drill and tutorial. 2 of 4 (Last Revised: 02/15/91)  |
| AMATH1-C.ZIP  | 104469 | 11-23-91 | Animated Math: animated math drill and tutorial. 3 of 4 (Last Revised: 02/02/91)  |
| AMATH1-D.ZIP  | 18617  | 11-23-91 | Animated Math: animated math drill and tutorial. 4 of 4 (Last Revised: 02/15/91)  |
| AMYPR202.ZIP  | 93634  | 01-02-93 | Amy's First Primer v.2.2 updated preschool program: a classic! now supports CGA, EGA, MCGA, and VGA. Learning games teach the alphabet, numbers and shape recognition. Highly recommended. (Last Revised: 12/04/92)   |
| ARITHQM.ZIP   | 94004  | 12-28-91 | CHILDRENS MATH -- WITH ACHIEVEMENT DATABASE (Last Revised: 05/08/91)  |
| ATLAS205.ZIP  | 241396 | 03-15-92 | Atlas v2.05: geography program and reference tool designed for anyone who needs to research facts about countries of the world. 08/08/91 (Last Revised: 08/08/91)   |

ATLAS93E.ZIP 170540 02-28-93

EducAtlas 1993  
World statistical atlas  
>>>>> 1993 issue !!!!! <<<<<<  
English version  
More than 160 countries - The new european states issued from USSR and Yugoslavia - The great organizations (NATO, EEC etc..) - Crossed sorting of all data - Printing on both laser and dot matrix printers. Save your maps in PCX files - You can update the data file. Shareware \$ 20 - >>> THE WORLD ON YOUR PC ! <<<

Files: 18 Newest: 02-23-93 Oldest: 03-11-92  
ATTENDANCE MGR DAY CARE/SCHOOL ACCTS RECEIV PGM (Last Revised: 06/29/92)

AWCMP1.ZIP 388921 06-27-92 Animated Words v1.0: spelling program for children from pre-school through first grade. The child is helped to match a word with its picture. When the word is correctly matched, pieces are added to a puzzle. After 5 correct words the puzzle becomes animated. 1 of 2 (Last Revised: 05/29/92)

AWCMP2.ZIP 386482 06-27-92 Animated Words v1.0: 2 of 2 (Last Revised: 04/30/92)

BABYK110.ZIP 118379 01-18-92 Baby Keys v1.1.0: learning program for children 6-24 months old; written especially for the curious infant; provides audio-visual (color patterns and sound) feedback from key strokes. (Last Revised: 09/02/91)

BRANDON.ZIP 217200 05-16-92 Brandon's BixBox v1.0: collection of 18 educational games for children 3-7; includes letter matching, memory/problem solving, counting games, numeric sequence games, addition drill, much more. 05/06/91 (Last Revised: 05/06/91)

BTB100.ZIP 102342 02-13-93 BEAT the BOMB v1.00: addition drill program; race against a clock, a bomb, or a snail or build castles with correct answers; many options: change number of problems, missing factors, etc.; sound, clock, animation can be turned on or off; Setups and scores saved; fast animated EGA/VGA graphics; requires mouse, EGA/VGA. (Last Revised: 01/27/93)

BTL.ZIP 126695 07-19-91 MATH TUTOR (Last Revised: 04/10/91)

CAI200.ZIP 252059 07-21-90 Computer Aided Instruction 2.0 - This is a BEST BUY shareware package to create automated tutorials, presentations, etc. (Last Revised: 06/15/90)

CALCTUT.ZIP 208498 08-22-92 TEACHES YOU CALCULUS PREREQUISITES. (Last Revised: 10/27/87)

CHILD\_PP.ZIP 317333 01-30-93 CHILDREN'S PRODUCTIVITY PACK (Last Revised: 01/28/93)

CIA92A.ZIP 491268 12-12-92 CIA WORLD FACT BOOK; 2.5MB IN HYPERTEXT PART 1 OF 3 (Last Revised: 11/17/92)

CIA92B.ZIP 525350 12-12-92 CIA WORLD FACT BOOK; 2.5MB IN HYPERTEXT; PART 2 OF 3 (Last Revised: 11/17/92)

CIA92C.ZIP 506891 12-12-92 CIA WORLD FACT BOOK; 2.5MB IN HYPERTEXT; PART 3 OF 3 (Last Revised: 11/17/92)

CIBOX.ZIP 90579 11-24-91 math tutor for kids (Last Revised: 03/08/87)

CLASBOOK.ZIP 121709 01-14-89 Teacher's helper (Last Revised: 12/16/87)

CLOCKGAM.ZIP 14679 09-23-89 For kids to learn time using analog clock (Last Revised: 04/27/86)

CMASTR50.ZIP 231805 12-22-92 CREATE YOUR OWN COURSE (OR TUTORIALS) (Last Revised: 03/28/92)

CMATHA.ZIP 50440 03-15-92 Chalkboard Math for Windows v1.0a: elementary math tutor for Windows 3.0; entertaining, game-like chalkboard interface with animation and sound-effects. 02/01/92 (Last Revised: 02/01/92)

COLLEGE92.ZIP 173795 02-29-92 Select-a-college 1992 help database of over 1500 schools. (Last Revised: 11/15/91)

COMMGL0S.ZIP 15697 03-20-92 Text file: communications glossary; one of the better glossaries on communication terms from QUATECH of Akron, OH. 03/14/92 (Last Revised: 03/14/92)

CPP.ZIP 287790 02-06-93 Children's Productivity Pack v1.0 Several entertaining and educational programs for children. COLOR is a 16 color coloring book program. DOT is a computerized version of dot to dots. ABC is an alphabet tutor. MATH is a math tutor for pre-schoolers, and MATHQUIZ is a math tutor for more advanced students. 256 color graphics support. 640K RAM, HDD, VGA color, mouse. (Last Revised: 02/02/93)

CRAYON20.ZIP 112419 10-03-92 Crayon Box v2.0: coloring, math quizzes, scratch pad and more are included in this EGA activities program for kids. 07/04/92 (Last Revised: 07/04/92)

CULTURE.ZIP 255387 10-23-92 Japanese Culture Kit VGA-Required

|              |        |          |   |              |        |          |   |
|--------------|--------|----------|---|--------------|--------|----------|---|
| DATAPRO#.ZIP | 188755 | 01-26-92 | Educational seminar on Japanese culture and business mentality. (Last Revised: 03/11/92)  | GRADE501.ZIP | 671664 | 05-06-92 | Full featured administrative program for teachers (grading/attendance/...) (Last Revised: 04/05/92)   |
| DINO01.ZIP   | 335914 | 02-13-93 | Teaches Data Processing skills; has employment test samples. (Last Revised: 01/10/92)   | GRADEB10.LZH | 11241  | 10-12-92 | GradeBook v1.0 - A database for private tutors that allows for easy handling of students' debts and information.  |
|              |        |          | Dollars and Dinosaurs v1.0b: The ABCD program with a cash payoff - in Dinosaur Dollars; this currency is issued on your printer after correctly spelling or matching 10 words; each word is illustrated by high resolution (640x480) animated graphics; ages 3 and up; requires VGA. 1 of 2 (Last Revised: 01/01/93)  | GRADEBK3.ZIP | 244965 | 07-18-92 | GRADE BOOK POWER v3.08: full featured grade book program for teachers creates comprehensive progress reports for parents, teachers, and students; use either two-9 week or 3-6 week terms per semester; create over 20 different reports; individual progress reports include assignment date, title, points possible and earned, letter grade, category averages, grading trend, personal & general comments, absences, missing and excused assignments, parent signature, grade override, weighting, grading scale, semester exam, extra credit. (Last Revised: 06/12/92) |
| DINO02.ZIP   | 148373 | 02-13-93 | Dollars and Dinosaurs v1.0b: spelling/matching program for ages 3 and up. 2 of 2 (Last Revised: 12/30/92)   | GRADEGID.ZIP | 68467  | 01-14-89 | Another teacher's helper (Last Revised: 02/23/85)   |
| DOD12.ZIP    | 218546 | 10-03-92 | Doctor on Disk v1.2: computerized medical book (Last Revised: 09/21/92)   | HANDSIGN.ZIP | 58790  | 04-15-90 | Excellent Tutorial for learning the language of the deaf. (Last Revised: 01/01/80)  |
| DODV1.BXE    | 202740 | 07-11-92 | * DOCTOR ON DISK * "THE COMPUTERIZED MEDICAL BOOK" *  | HERBS.ZIP    | 101597 | 01-22-91 | Short mono graphs on herbal medicine (Last Revised: 06/04/89)   |
| DOSIMP12.ZIP | 315655 | 03-28-92 | DOS, Simply Said, Simply Done, Simply Easy! v1.2: hypertext manual covers DOS versions through DOS 5.0. (Last Revised: 01/16/92)  | IQTEST.ZIP   | 17491  | 11-29-92 | IQTest for Windows. V2.0. Reasonably accurate. (Last Revised: 04/25/92)   |
| DOSSUM20.ZIP | 150793 | 04-01-92 | Dos Summary v2.0 Dos Command Summary A hypertext tutorial and reference product which covers all DOS commands and drivers through MS-DOS v5.0. Also added are tutorials covering memory management and how DOS starts the program can be used in standalone or resident mode. Hypertext organization allows the user to follow any education path that suits their needs. <ASP> From Computer Knowledge and Shareable Software Int'l. (Last Revised: 03/22/92)                            | ITALIAN2.ZIP | 117873 | 10-31-92 | TRANSLATOR/Dictionary   |
| ELM320SW.ZIP | 161231 | 05-16-92 | Element Study Aid 3.2 This version has all 118 elements (Last Revised: 04/14/92)  | JAPANESE.ZIP | 117052 | 07-29-90 | English/Italian/English. Translates single words and phrases! Phonetic spelling of what the word or phrase should sound like. English/Italian or Italian/English quiz. Prints a sorted dictionary. User input limited only to available disk space. Ideal for the foreign language student or teacher. (Last Revised: 10/25/92)   |
| FASTART.ZIP  | 133263 | 04-09-91 | PRE-SCHOOL/FIRST GRADE EDUCATIONAL GAMES, REQ. CGA (Last Revised: 03/26/91)   | JDIC1.#00    | 600000 | 10-18-92 | Tutorial on the Japanese Language. Very basic, good for beginners. (Last Revised: 07/29/90)   |
| FASTREAD.ZIP | 346116 | 10-10-92 | IMPROVE READING SPEED AND COMPREHENSION (Last Revised: 04/14/92)  | JDIC1.#01    | 270107 | 10-18-92 | JDIC1.ZIP split for downloading. Use AUTOCHP1.ZIP to re-assemble.   |
| FASTYPE.ZIP  | 141336 | 09-07-87 | PC-FASTYPE typing instructor (Last Revised: 07/15/87)   | JDIC1.ZIP    | 870064 | 09-26-92 | Japanese-English Dictionary. 1 of 2. It takes 2.6MB, but is very good. (Last Revised: 08/24/92)   |
| FCS10.ZIP    | 214033 | 09-19-92 | FLASH CARD SPANISH- SPANISH TUTOR (Last Revised: 09/04/91)  | JDIC2.ZIP    | 675269 | 09-26-92 | Japanese-English Dictionary 2 of 2 (Last Revised: 08/24/92)   |
| FCSP10.ZIP   | 106611 | 10-17-92 | LEARN SPANISH FROM FLASH CARDS (Last Revised: 09/04/91)   | KAPIAN.ZIP   | 142865 | 10-16-92 | Wanna learn Chinese Language??? TRY THIS ONE (Last Revised: 09/16/91)   |
| FIRSTAID.ZIP | 30586  | 07-27-91 | First aid manual. (Last Revised: 06/19/91)  | KCLOCK20.ZIP | 64033  | 12-04-92 | PROGRAM TO HELP CHILDREN LEARN TO TELL TIME (Last Revised: 03/19/92)  |
| FLCARD.ZIP   | 77421  | 01-16-93 | FLASH CARDS FOR PRESCHOOLERS/PARENTS. (Last Revised: 01/10/93)  | KS10.ZIP     | 29670  | 01-18-92 | KINDER SKETCH v1.0: a nice simple drawing program for children; for graphic monitors. (Last Revised: 01/13/92)  |
| FMSMF.ZIP    | 59839  | 07-27-91 | Melissa's Music Flashcards: teach kids of all ages about musical notes; set the type of note that appears on the screen from flats to sharps; the program will acknowledge if you are right. (Last Revised: 05/08/91)   | LEAN200.ZIP  | 282890 | 08-11-92 | LEANER is a health risk assessment and weight control program. Lifestyle changes using behavioral modification strategies and motivational techniques keep the fat fires burning. No traditional diary method can provide so many different ways of reviewing your progress without forcing you to do the plotting and charting. Supports groups. (Last Revised: 06/17/92)  |
| FORM1.EXE    | 159182 | 08-10-91 | A HIGH SCHOOL/COLLEGE ALGEBRA TUTOR   | LEARN1.ZIP   | 182478 | 06-27-89 | Typing lesson - good program! (Last Revised: 03/06/89)  |
| FORMULA1.ZIP | 163186 | 06-26-91 | High school/college algebra program that combines computer-based training with artificial intelligence. The AI algorithm becomes a tutor that monitors your progress and guides you through the course. (Last Revised: 06/26/91)  | LLETTER.ZIP  | 82316  | 12-04-92 | LEARNING LETTERS: EDUCATIONAL PROGRAM FOR KIDS (Last Revised: 02/02/92)   |
| FRENCHTH.ZIP | 178701 | 07-08-92 | A program to help learn French (Last Revised: 07/08/92)   | LPIN2251.ZIP | 255681 | 12-19-92 | LESSONPLANZ 2.51 LESSON PLANNING MADE EASY (Last Revised: 12/19/92)   |
| FTVGA10.ZIP  | 276089 | 08-15-92 | PC-FastType/VGA V1.0 TYPING TUTORIAL FOR VGA PC-FastType/VGA is a menu-driven interactive typing tutorial for computer enthusiasts who want to improve their typing skills. Program displays a 3D image of the keyboard and uses keyboard animation to prompt typist to type the correct key. Supersedes CGA versions. Shareware; ASP Member since 1987. (Last Revised: 07/01/92)   | LSIGN1.ZIP   | 54342  | 11-11-90 | Sign language tutor.restricted to the manual alphabet but very good graphics.Speed and clarity of finger positions good. You set your own configuration for easy learning/viewing. Best online sign tutor I (a deaf person) have found. (Last Revised: 05/01/90)  |
| FUN-LW.ZIP   | 131920 | 06-08-91 | FUN WITH LETTERS & WORDS V2.20, KIDS 2-6, CGA. (Last Revised: 05/07/91)   | MATH.ZIP     | 49265  | 06-11-91 | THE ULTIMATE MATH DRILL! Ideal for children from grade school to high school. Addition, Subtraction, Multiplication or Division. Keeps track of right/wrong answers and gives correct answer. Designed like a sheet of paper. Requires Graphics Card. /exit (Last Revised: 06/11/91)  |
| FUN-WD.ZIP   | 98496  | 06-08-91 | FUN WITH DESIGNS, KIDS 2-6, CGA. WORKS W/FUN-LW. (Last Revised: 05/08/91)   | MATHCMP.ZIP  | 314914 | 03-30-91 | ANIMATED MATH..TEACH KIDS TO COUNT, ADD, SUBTRACT (Last Revised: 02/17/91)  |
| FUNNELS.ZIP  | 48494  | 09-21-84 | Good math tutor game for grades 1-4 and up (Last Revised: 09/21/84)   | MATHEASY.ZIP | 223808 | 08-03-92 | MATH MADE EASY - PART 162 V1.0 Enables the User to: Learn the four basic mathematic functions: Addition, Subtraction, Division, and Multiplication (Math tables are in Part2) (Last Revised: 02/23/92)  |
| GB204.ZIP    | 237361 | 02-13-93 | Gradebook for Windows v2.04: advanced Windows 3.x based GradeBook for the professional educator; requires VBRUN200.DLL; features online help, user categories, optional ID#'s, total points or weighted scores, discard worst score(s), extra credit, score & grade distribution with charts, progress reports, import/export; clipboard and font support, interim weights, required final scores, teacher teacher notes, more; also with Word and Excel macros. (Last Revised: 01/16/93) | MATHSHOP.ZIP | 51567  | 12-09-90 | GOOD MATH TUTOR FOR SMALL CHILDREN (Last Revised: 06/21/87)   |
| GEOGRAPH.ZIP | 233754 | 07-31-92 | A tutorial on U.S. geography (Last Revised: 07/08/92)   | MATHWO.ZIP   | 353817 | 05-16-92 | Math Workout 1.0: Arithmetic drill for all ages-- even adults-- that is comprehensive, stimulating, uniquely straightforward, rewarding, and designed especially for mastering mental calculation. 180 levels. 6 ways to practice including Mixed Levels, Estimation, & Beat-the-Clock. Covers +,-,x,/, decimals and percentages. Graphs grades & speeds. Mistake review. 17 user-definable defaults. Shareware (\$49)/The Dobrin Company. (Last Revised: 05/12/92)   |
| GEOMET1.ZIP  | 118238 | 07-06-91 | PART 1 OF GEOMETRY/TRIG/CALC LEARNING PROGRAM (Last Revised: 11/04/89)  |              |        |          |   |
| GEOMETR2.ZIP | 88946  | 07-06-91 | PART2 OF GEOMETRY/TRIG/CALC LEARNING PROGRAM. (Last Revised: 11/04/89)  |              |        |          |   |
| GERM1-25.ZIP | 60449  | 05-16-92 | German Teacher 1, Version 2.5 (Last Revised: 04/11/92)  |              |        |          |   |
| GPA.ZIP      | 24452  | 11-09-92 | Students, Calculate your G.P.A. and total grade points. No more trying to remember how they do it. Simple but effective. (Last Revised: 11/09/92)   |              |        |          |   |
| GRAB2.ZIP    | 321962 | 07-27-91 | VAR Grade v4.65: teacher grading program. 3 of 3 (Last Revised: 05/22/91)   |              |        |          |   |

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|--------------|--------|----------|--|--------------|--------|----------|---|
| MSMASTR.ZIP  | 141556 | 01-22-91 | Memory improvement course (Last Revised: 07/18/90)   | PPK10A.ZIP   | 234985 | 08-29-92 | PRESCHOOL PACK 1.0: EDUCATIONAL CHILDREN'S FUN [1/2]  |
| MENUP.L.ZIP  | 175990 | 05-16-92 | Menu Plus v1.1: full featured menuing system; includes command editor, directory tree, screen saver, one-touch software selection, usage tracking, import/export, context sensitive help, password protection, more. (Last Revised: 05/01/92)  | PPK10B.ZIP   | 363729 | 08-29-92 | (Last Revised: 08/24/92)<br>PRESCHOOL PACK 1.0: EDUCATIONAL CHILDREN'S FUN [2/2]  |
| MFLASH.ZIP   | 68365  | 07-11-92 | Math Flash v1.0: teaches elementary math skills (count/add/subtract). (Last Revised: 06/24/92)   | PRECALC.ARC  | 179712 | 05-09-91 | (Last Revised: 08/24/92)<br>A good brush-up on a variety of subjects. runs on one disk, from the U. of TX as P.D.   |
| MGM.ZIP      | 125581 | 11-10-90 | Magic Gradebook Manager - Award winning gradebook program. If you are a teacher, you will wonder how you ever got along without it! Looks just like a real gradebook, easy. (Last Revised: 11/10/90)   | PROFSTAT.ZIP | 119519 | 01-11-93 | Professor Weissman's Statistics Tutorials v2.12: random problems just like those in an introductory statistics textbook, with step-by-step solutions; the program maintains a record of the student's progress and has three levels of difficulty; additional sets of problems are available from the author. 01/11/93 (Last Revised: 01/11/93)       |
| MINMST-1.ZIP | 131541 | 04-02-91 | MINERAL IDENTIFICATION PROGRAM 1 OF 3 (Last Revised: 03/24/90)   | QBASE10.ZIP  | 33467  | 06-13-92 | Quiz database for educators (Last Revised: 05/03/92)  |
| MINMST-2.ZIP | 66125  | 04-02-91 | MINERAL IDENTIFICATION PROGRAM 2 OF 3 (Last Revised: 01/09/90)   | QSTV4V3B.ZIP | 378398 | 09-12-92 | QUICK STUDY TECHNOLOGY - SPEED READING COMPREHENSION (Last Revised: 08/23/92)   |
| MINMST-3.ZIP | 123278 | 04-02-91 | MINERAL IDENTIFICATION PROGRAM 3 OF 3 (Last Revised: 01/07/90)   | QUICTYPE.ZIP | 46962  | 09-17-89 | Practice your touch typing (Last Revised: 07/13/89)   |
| MITYMATH.ZIP | 94096  | 03-30-91 | MITYMATH: BATTERY OF MATH TESTS W/COMPETITION (Last Revised: 03/17/91)   | QUIZM3.ZIP   | 198259 | 01-01-93 | QuizMaker v3.0 is an educational tool and a Trivia game. Make or take quizzes in three formats - match the question with the answer, type in an answer to the question, or choose the correct answer from the four or five answers listed. <<ASP>> (Last Revised: 11/25/92)   |
| MM630.ZIP    | 139336 | 07-27-92 | Meal-Master v6.30; Menu-driven database prog manages recipes-Store, Update, Print, Search using any combination of Title, Category, and ingredient; Find all made w/ same ingredient! Change number of servings & all ingredient amounts adjust automatically; Mark recipes & MM generates shopping list and prints it. (Last Revised: 12/18/91)   | QUIZMAKE.ZIP | 106305 | 06-26-91 | Create quizzes, tests and multiple-choice questions; features hypertext 'encyclopedea' where quiz or test items may be explained in detail. Great for trivia as well as serious teaching and/or training use. (Last Revised: 06/16/91)  |
| MMARYLND.ZIP | 4081   | 07-27-92 | Recipes for Meal Master (Last Revised: 09/03/90)   | QW.ZIP       | 33928  | 11-26-89 | Create & administer true/false, multiple choice & short answer quizzes (Last Revised: 09/08/89)   |
| MMBEEF.ZIP   | 12935  | 07-27-92 | Recipes for Meal Master (Last Revised: 12/29/90)   | RCPCWIN.ZIP  | 73825  | 12-05-90 | Recipe Manager for all the cooks! Nice application, runs under Windows 3.0 (Last Revised: 11/26/90)   |
| MMCHCKEN.ZIP | 3759   | 11-01-92 | Recipes for Meal Master (Last Revised: 01/06/91)   | RDFAST14.ZIP | 53622  | 01-26-90 | READFAST v1.4. Computer-aided reading improvement program. (Last Revised: 05/16/89)   |
| MMCOWBOY.ZIP | 7917   | 07-27-92 | Recipes for Meal Master. (Last Revised: 12/29/90)  | SAT.ZIP      | 40283  | 08-18-92 | This program is used to make SAT answer sheets. Uploaded by Peter Pham (Last Revised: 08/18/92)   |
| MMGARLIC.ZIP | 11240  | 07-27-92 | Garlic recipes for Meal Master. Uploaded by Manny Rothstein (Last Revised: 12/29/90)   | SCHED25.ZIP  | 23598  | 03-08-90 | Helps freshman/soph select best class schedule (Last Revised: 04/25/89)   |
| MMTYF101.ZIP | 668129 | 02-20-93 | MMTYPE.EXE v1.01 - teaches touch-typing much faster by adapting exactly to the learner. Delays repetition wisely; repeats before you forget. Repeating only at the best time, needs much less repetition than other tutors. Files: 20 Newest: 01-28-93 Oldest: 10-27-91  | SHAPECMP.ZIP | 296375 | 06-20-92 | Animated Shapes: teaches shape and color identification using a colorful menu system designed for children; each shape that is correctly identified combines with other shapes to create a picture; upon completion, the picture becomes an entertaining mini-movie. (Last Revised: 06/16/92)   |
| MOM357A.ZIP  | 153385 | 07-14-91 | SCHOOL MOM VERSION 3.57 EDUCATIONAL GAMES AGES 4-14 (Last Revised: 04/06/91)   | SIGN37.ZIP   | 239264 | 06-23-92 | Sign Friends: sign language tutor; shows word phrases, letters, numbers; VGA required. (Last Revised: 05/18/90)   |
| MOMSMA20.ZIP | 63521  | 04-01-92 | MOM'S MATH, an educational tool for children of all ages. Features include several games, Arithmetic, and Prealgebra Math. <<ASP>> (Last Revised: 02/22/92)  | SIGNUP.ZIP   | 40915  | 01-14-89 | Register participants in workshops (Last Revised: 06/22/85)   |
| MTHMST27.ZIP | 93336  | 06-07-91 | MATHMASTER V2.7 EDUCATIONAL MATH PROGRAM (Last Revised: 05/25/91)  | SIGN TUT.ZIP | 163604 | 09-19-92 | SIGN LANGUAGE TUTOR (Last Revised: 12/29/89)  |
| NBN10.ZIP    | 134788 | 01-08-92 | Note by Note v1.0-ideal for beginners of all ages who wish to learn to read music. Great graphics-requires vga (Last Revised: 09/05/91)  | SLIMI.ZIP    | 87867  | 06-13-92 | A VGA DIETER'S PROGRAM, SHOW CHART, CALORIES, ETC (Last Revised: 06/13/88)  |
| PC-CAI2.ZIP  | 240660 | 06-15-91 | PC-CAI v2.05: create computer driven tutorial on any subject; PC-CAI authoring program lets you create tutorials without programming; use sound, graphics, animation, color and more; teach concepts, ask questions, record answers grade results; CGA required. (Last Revised: 04/24/91)  | SPAN.ZIP     | 142762 | 07-27-91 | SPANISH LANGUAGE TUTOR (Last Revised: 06/08/91)   |
| PC-TOUCH.ZIP | 12105  | 05-02-89 | Touch typing drill program (Last Revised: 03/23/86)  | SPAN1-25.ZIP | 61061  | 05-16-92 | Spanish Teacher 1, Version 2.5 (Last Revised: 04/11/92)   |
| PCA100.ZIP   | 101393 | 09-01-92 | PC ALLOWANCE v1.0 <ASP> - Teach kids the basics of banking and handling money and automate their allowance at the same time. Colorful ATM screen, pop-up menus, full mouse support. Multiple accounts, passwords, memos, checks, account statements. Accrue allowance, make deposits and withdrawals, earn interest on savings, borrow and repay loans. From John Byrd and Syntonic Software. (Last Revised: 08/10/92) | SPAN2-25.ZIP | 58405  | 05-16-92 | Spanish Teacher 2, Version 2.5 (Last Revised: 04/11/92)   |
| PCCAI2.ZIP   | 253367 | 12-19-92 | PC-CAI 2.07 is for anyone who wants to create computer driven tutorials, tests or demos on the PC. This award winning software lets you easily construct programs using text, color, graphics, sound, PCX graphics and animation. Ask questions, branch according to the answer, display menus, record grades. (Last Revised: 11/01/92)  | SPANISH.ZIP  | 89024  | 10-18-88 | Phrase book that talks - very good tutor (Last Revised: 08/26/88)   |
| PCFTYP.ZIP   | 129599 | 01-19-90 | PC-Fast type v3.0, tutor on enhanced keys too (Last Revised: 08/01/87)   | SPANISH2.ZIP | 118552 | 10-31-92 | TRANSLATOR/Dictionary English/Spanish/English. Translates single words and phrases! Phonetic spelling of what the word or phrase should sound like. English/Spanish or Spanish/English quiz. Prints a sorted dictionary. User input limited only to available disk space. Ideal for the foreign language student or teacher. (Last Revised: 10/25/92) |
| PCLERN5.ZIP  | 232233 | 02-16-91 | EW RELEASE (2/12/91) OF OUTSTANDING COMPUTER TUTOR (Last Revised: 02/12/91)  | SPANSHTH.ZIP | 183761 | 07-31-92 | A program to help you learn Spanish (Last Revised: 07/08/92)  |
| PDE1.ZIP     | 101586 | 02-10-89 | Partial Differential Equations Tutorial File 1 of 3. (Last Revised: 02/10/89)  | SPEEDRD.ZIP  | 31878  | 11-09-91 | SPEED READING PROGRAM (Last Revised: 05/16/88)  |
| PDE2.ZIP     | 84926  | 02-10-89 | Partial Differential Equation Tutorial File 2 of 3 (Last Revised: 02/10/89)  | SPELL200.ZIP | 308081 | 02-16-91 | Version 2.00 of SPELLBOUND! Spelling Tutor Many, Many new features. Complete program, nothing disabled. New installation program fully automates installation. No more kludgy batch file installation. Easier to use. (Last Revised: 01/03/91)  |
| PDE3.ZIP     | 93245  | 05-26-89 | Partial Differential Equation Tutorial File 3 of 3 (Last Revised: 05/26/89)  | SPSW-1-5.ZIP | 164333 | 08-03-92 | SPELL AND PRONOUNCE SPANISH WORDS V1.5 Enables the User to: Learn how to spell and pronounce Spanish words in a short period of time. A great brush-up tool for refresher training. (Last Revised: 05/11/92)  |
| PENDULUM.ZIP | 228641 | 06-03-92 | Pendulum: educational program for physics students at the high school & junior college levels or for anybody interested in learning more about mechanical systems. 03/20/92 (Last Revised: 03/20/92)   | STATES1A.ZIP | 188544 | 05-06-89 | Test historical knowledge of American States (Last Revised: 05/01/89)   |
| PLAYNLNR.ZIP | 135850 | 09-14-91 | Play 'n Learn v2.12: a collection of six educational games for children 18 months and older. (Last Revised: 09/13/90)  | STATES1B.ZIP | 188253 | 05-06-89 | Disk 2 of STATES (Last Revised: 04/02/89)   |
|              |        |          |  | STP_91.ZIP   | 210926 | 02-27-92 | Save the Planet 1991 v2.10: educational database on global environmental issues; with 1991 data; includes suggestions on what you can do, current legislation, list of  |

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|--------------|--------|----------|---|--------------|--------|----------|---|
| TALKABC1.ZIP | 167920 | 05-16-92 | environmental organizations; CGA, EGA, or VGA required. (Last Revised: 05/29/91)  | TWRITE22.ZIP | 274816 | 02-26-92 | LATEST VERSION 2.2 OF TUTORIAL WRITER FROM INTELLIGENT EDUCATIONAL SOFTWARE - DIRECT FROM COMPANY (Last Revised: 02/02/92)  |
| TALKABC2.ZIP | 250197 | 05-16-92 | Alphabet game for 3-5 year olds. Nice graphics and voice. 1 of 2 (Last Revised: 01/18/92)   | TYPEDOS.ZIP  | 47106  | 12-15-90 | Learn to use DOS effectively (Last Revised: 08/22/90)   |
| TEACH13A.ZIP | 348334 | 12-13-92 | Alphabet game 2 of 2. (Last Revised: 01/18/92)  | TYPETIME.ZIP | 12027  | 09-17-89 | Typing tutor - no docs (Last Revised: 06/01/89)   |
| TEACH13B.ZIP | 353912 | 12-13-92 | TALKING TEACHER for SOUND BOARDS v1.3: new educational package with REAL HUMAN SPEECH that teaches children (1-17) how to talk, the alphabet, read, write, spell and use a computer; you can record your own voice and use it in this package; you can also change the spelling words to match your child's weekly spelling words; supports Sound Blaster, Thunder Board and compatibles; EGA/VGA required. 1 of 2 (Last Revised: 11/06/92)         | TYPING.ZIP   | 62515  | 11-09-91 | Typing TUTOR (Last Revised: 09/29/91)   |
| TELEDX10.ZIP | 137232 | 03-28-92 | TALKING TEACHER for SOUND BOARDS v1.3: new educational package that teaches children (1-17) how to talk. 2 of 2 (Last Revised: 11/06/92)  | VOCHEM.ZIP   | 111359 | 10-04-85 | Visual Chemistry Tutorial (Last Revised: 10/04/85)  |
| TESTDRIV.ZIP | 28998  | 03-03-92 | TELEDX10 v1.0: electronic telecommunications primer; hypertext covering all aspects and considerations of modem use; also describes RS232 designations. (Last Revised: 02/28/92)  | VOCAB-QZ.ZIP | 48769  | 12-29-91 | Vocabulary Quiz for the educated. With over 1,200 words of above-average difficulty. Truly a logodaedalian's delight. Freeware from the Tsou Brothers Byte Factory. Get it! (Last Revised: 12/27/91)  |
| TOUCHTYP.ZIP | 37614  | 02-15-90 | Test Designer for Teachers/Professors/Etc. Designed by myself. Feel free to drop comments, suggestions, etc. via Email. (Last Revised: 03/02/92)  | VOCAB10.ZIP  | 54012  | 06-23-90 | VOCABMASTER 1.0 - SAT Vocabulary Builder Shareware program to help students to prepare for the SAT. Menu driven with many features. (Last Revised: 06/23/90)  |
| TPET.ZIP     | 524919 | 11-05-92 | Very good touch typing tutoring program... (Last Revised: 05/23/89)   | VOCAB4.ARC   | 82944  | 11-06-89 | Vocabulary builder - college level  |
| TRANSLAT.ZIP | 111402 | 03-11-92 | Teacher's Pet is an Electronic Gradebook designed to alleviate the manual work associated with setting up a class and assigning grades. A wide variety of grading techniques are supported and many helpful reports can be created instantly. (Last Revised: 11/05/92)  | VOCPI0.ZIP   | 61478  | 07-27-91 | TEACH, QUIZ, TEST NEW VOCAB WORDS; GRADES 9-12 (Last Revised: 07/17/91)   |
| TTTUTOR.ZIP  | 54406  | 03-13-92 | Comprehensive English/Spanish/English translator/dictionary. Translates single words and phrases. Shows phonetic spelling of what the word or phrase should sound like. English or Spanish quiz. Prints a sorted dictionary. Ideal for the Spanish language student or teacher. Data file limited only to available disk space. (Last Revised: 07/19/91)  | WINDOS_D.ZIP | 533048 | 08-25-90 | DOS/WINDOWS HYPERTEXT DOS REFERENCE (Last Revised: 08/11/90)  |
| TTTWIN10.ZIP | 56122  | 10-31-92 | Touch Type Tutor for Windows v1.0 <ASP> - Intelligent self customizing typing tutor. Super easy-to-use TOUCH TYPING TUTOR for Windows 3.X. Whether you want to rate a professional typist's speed or learn to touch type from scratch, this program has it all! Intelligently customizes to learner's skill level, ensuring the fastest learning curve. Suitable for individual use, for teachers and for employers. \$20. (Last Revised: 08/31/92) | WINHLP.ZIP   | 11794  | 02-24-91 | A long text file with many commonly asked questions about setting up and running Windows 3 - compiled by Nicholas Goldwyn from an original source file at the University of Waterloo (Last Revised: 02/06/91)   |
| TW30.ZIP     | 323540 | 01-01-93 | TutorialWriter v3.0 is a non-programmer's computer toolkit which creates full-color computer based Manuals or Tutorials with HyperText, Pop-Up Windows, Menus, Colors, Sounds, Graphics, Tests, Quizzes, Online Help, Mouse Support and more. <<ASP>> (Last Revised: 11/28/92)  | WLDATLAS.ZIP | 342355 | 11-30-90 | DEMO VERSION of the new World Atlas Program (Last Revised: 09/25/90)  |
|              |        |          |   | WNRG11.ZIP   | 221182 | 12-19-92 | Register for Windows; comprehensive grading program for teachers; uses points up to 999, room for 80 grades for each of 150 students per class; extensive reporting and exporting of grades and statistics; requires Windows 3.1, a sound driver, TrueType or Postscript font and VBRUN100.DLL (Visual Basic). Based on 4 quarters; Shareware GRADES STUDENTS EDUCATION WINDOWS Denis L Latkowski, version 1.1 (Last Revised: 08/22/92) |
|              |        |          |   | WORDPART.ZIP | 144497 | 09-17-89 | PC-DICTIONARY has 10,000 definitions (Last Revised: 04/02/89)   |
|              |        |          |   | WORLD.ZIP    | 70830  | 10-08-88 | Explore geography of the world & capitols (Last Revised: 11/10/85)  |
|              |        |          |   | XYSER30A.ZIP | 143095 | 12-13-92 | XYSee v3.0a: high performance math supplement to high school and college level studies in Algebra, Geometry, and Trigonometry; covers SAT, ACT, & Math Placement Test material; intuitive menu structure, comprehensive tutorial, context-sensitive help and statistics; suitable for home use without professional supervision. (Last Revised: 11/06/92)   |
|              |        |          |   | YOUNG.ZIP    | 132093 | 07-14-91 | GREAT GAMES FOR CHILDREN FOR LEARNING (Last Revised: 12/07/89)  |
|              |        |          |   | ZPELR200.ZIP | 228658 | 09-26-92 | Zpeller 2.00 Spelling & Vocabulary Teacher. Handles up to 19 students, student enters correct spelling & definitions for up to 32000 words. Performs 7 different types of tests, and tracks wrong answer for immediate retest. Also has test battery for problem words that are constantly missed. From Unicorn Software Limited [ASP Member] (Last Revised: 04/12/92)  |

Total files in area = 196

## APPENDIX B: School District Surveys

### Questions:

\* Typical School =

- a) 1 micro per classroom (Apple II)?
- b) 1 micro lab 3 or more computers? (types?)
- c) 1 school computer specialist or 1 district specialist?
- d) how many elementary schools in your district

| SCHOOL DISTRICT  | 1 PC PER CLASS                       | PC LABS   | DISTRICT SPECIALIS   |
|--|--------------------------------------|---|--|
| <b>Anaheim City Elementary School District</b> (535-6001), Dan Robertson, 21 schools                   | no                                   | yes, 17-25 Mac LCs  | district level specialist, labs run by instructional aides                               |
| <b>Buena Park School District</b> (522-8412) 6 primary, 1 jh   | no                                   | yes, 30 IBM PS/2, with file server and Josten's software                        | labs run by instructional aides  |
| <b>Capistrano Unified:</b> (489-7000), Pat Levens (489 -7275) 21 schools                               | no                                   | 1 lab 8-10 stations; some classroom with 3, some none; Apples II, MAC, IBM P/S2 | one contact person per school.   |
| <b>Orange Unified:</b> 997-6101, 6307 - elem. education 26 schools                                     | a few have 1 per classroom           | most have labs (Apples), number of micros unknown                               | most have one parent monitoring the school lab   |
| <b>Saddleback Valley Unified MSVJ</b> (586-1234), Linda Smith, tech specialist, Carol Kent; 23 schools | n/a                                  | lab with 20 Apple IIs & Macs  | on-site specialist   |
| <b>Santa Ana Unified School District</b> 558-5883 assist. super.; 29 schools                           | n/a                                  | yes, number unknown   | Carver - science-tech school   |
| <b>Westminster School District:</b> 894-7311, Mr. Lawson; 14 primary                                   | 1/2 classrooms with single computers | lab yes, stations 16 (up to 30), Apple IIe, some GS                             | no at district level, some labs run by instruction aide (or teacher-plus regular duties) |

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